

Proposal  
for  
**SOS:**  
**Small-business**  
**Outreach**  
**Seminars**

2003 Energy Efficiency Program Selection  
Proceeding Number (Rulemaking) R.01-08-028  
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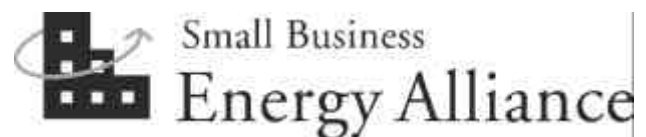
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# *Table of Contents*

Executive Summary	1
Background.....	1
A New Marketing and Outreach Program.....	2
About ASW and the Small Business Energy Alliance .....	3
Program Cost Proposal	4
Payment Schedule.....	5
The Proposed Marketing Campaign and Outreach Program	6
Goals of the Presentations .....	6
Description of the Proposed Presentations .....	7
Addressing Customer Questions and Concerns .....	9
The Proposed Marketing and Outreach Effort .....	10
A Targeted Approach to Identify Customers .....	11
Media Outlets .....	11
Expected Number Of Promotional Spots, etc. to be Produced or Developed.....	12
Expected Target Audience .....	12
Key Characteristics of the Target Population .....	13
Number of IOU Customers Expected to be Reached.....	13
Plans for Coordinating with Other Program Providers.....	14
Methods of Evaluating Success and Using the Results to Make Improvements .....	15
Description of Implementer's Qualifications.....	16
Relevant Experience .....	16
The SBEA Team .....	17
Qualifications of Primary Implementer .....	18
Qualifications of Proposed Subcontractors .....	20
Disclosure of Any Potential Conflicts of Interest.....	21
Timeline for Program Implementation .....	22
Selected Resumes and Sample Training Pages	24
David Wylie .....	25
Vic Sanchez.....	27
Larrie Engel .....	28
Thomas A. Jones, Jr. ....	29
William W. Rock.....	30

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# Executive Summary

ASW Engineering Management Consultants, Inc., is pleased to respond to the request for proposal from the California Public Utilities Commission (CPUC) for the 2003 Statewide Marketing/Outreach Program.

ASW is offering to conduct educational and motivational presentations to provide information about many of the energy efficiency programs and third-party initiatives currently being conducted throughout the state.

ASW Engineering proposes to design, create, market, and deliver up to 50 educational and motivational presentations to eligible groups of small business owners, managers, and operators. This outreach program will include efforts to target hard-to-reach nonresidential small business consumers.

## Background

In March 2001, the CPUC and Southern California Edison approved the implementation of a Third Party Initiative (TPI) program submitted by ASW Engineering Management Consultants. This pilot implementation of the *Energy Savers Program* helped hundreds of small business owners in the southern California area increase their profits by lowering their energy usage.

The pilot program used matching funds from the state of California to subsidize efficient lighting, air conditioner tune-ups, and programmable thermostats. The pilot *Energy Savers Program* was extremely successful and the CPUC funded for 2002 and 2003 an updated implementation of the program. The Small Business Energy Alliance (SBEA) *Energy Savers Program* is currently offering small business owners energy audits (at no cost) and incentives for employing the same energy efficiency measures, with the addition of refrigeration system tune-ups.

The SBEA *Energy Savers Program* pilot implementation in 2001 offered energy efficiency services to approximately 400 small businesses in the southern California area over the course of the eight months of the program, and more than 75% of those offered the services opted to take part in the program. The pilot program exceeded its initial kW and kWh savings goals and was completed on schedule and within budget.

The recent, unanticipated downturn in California's economy has changed the environment and circumstances under which the pilot program was so successful. As a result, this year's program is not performing as well as expected. Unfortunately, only about 15% of the businesses we have contacted this year have chosen to implement any of the program's energy efficiency measures. Although many businesses we have contacted have expressed interest in the incentives the program offers, many do not feel they have the funds to invest at this time.

## A New Marketing and Outreach Program

Because of the increased difficulty “selling” the programs, we feel there is now a need to motivate and educate some of our small commercial customer base regarding the long-term economic benefits of implementing the energy efficiency measures our program and others like it have to offer.

We propose to implement a new educational, marketing and outreach program, delivering educational and motivational presentations focused on the advantages that the *Energy Savers Program* and other similar programs offer.

Our target customers are small businesses that we hope to reach through business-oriented professional organizations, non-profit organizations, community organizations, associations, and so on.

In addition to directly signing up customers in the *Energy Savers Program* and other programs, we anticipate a tangential benefit offered by the proposed presentations in the form of increased awareness of energy efficiency in general. These presentations will provide additional promotion of the statewide “Flex Your Power” program and will help increase customer awareness of the importance of energy efficiency projects and products — not only in their businesses, but in their homes as well. This will result in some degree of additional energy savings, and we hope will motivate customers to sign up for our program and others.

Our experience with this program and its proven approach demonstrates our understanding of the requirements of small business energy programs, which have served customers with diverse economic and cultural backgrounds in a variety of locations.

The existing *Energy Savers Program* is a “Local Program” that is providing energy audits and incentives to customers in underserved regions of southern California, specifically, Santa Barbara, Ventura, San Bernardino, Riverside counties, and rural areas of Los Angeles county. All of the areas are served by Southern California Edison.

The target market segment is “Small Nonresidential Comprehensive Retrofit” and falls under the category of “Nonresidential Hard-to-Reach.” Our program targets “Very Small Nonresidential,” “Small Nonresidential,” and “Medium Nonresidential” businesses.

The anticipated budget for 2003 will be \$248,528. The source of funding is PGC funds.

This document describes the marketing and outreach program we propose.

## About ASW and the Small Business Energy Alliance

This proposal is submitted by the Small Business Energy Alliance (SBEA) managed by:

ASW Engineering Management Consultants, Inc.  
2512 Chambers Rd. #103  
Tustin CA 92780  
(714) 731-8193

Contact persons:

- David Wylie P.E., Vice President, Program Director, ASW Engineering Management Consultants
- Christine Baginski, Engineer and Program Manager, ASW Engineering Management Consultants

**Organizational Mission:** The purpose of the Small Business Energy Alliance is to educate and facilitate. Specifically, the SBEA:

- Serves as an advocate to small businesses
- Educates small business owners, operators, and managers about energy efficiency measures
- Provides access to incentive and rebate programs that offer financial support
- Makes it simple for businesses to participate in these programs  
(We handle all of the paperwork and schedule the installation work through one point of contact.)

ASW Engineering Management Consultants is certified by the California Public Utilities Commission as a Minority-Owned Business Enterprise.

# Program Cost Proposal

This section describes the proposed budget required to implement the proposed Small-business Outreach Seminars (SOS). In addition to the summary information provided here, the budget is provided in an Excel spreadsheet on diskette as requested.

We acknowledge that upon acceptance of any proposal, a more complete budget may need to be filed following the worksheet format used for the program implementation plans for the 2002 programs.

Administrative Costs	
Labor	\$ 41,833.02
Benefits	\$ 15,059.89
Travel/Conference/Training	\$ 2,500.00
Reporting/Tracking/Development-Information Services	\$ 1,673.32
Materials & Handling	\$ 1,673.32
Overhead and General and Administrative Costs	\$ 8,366.60
<b>Total Administrative Costs</b>	<b>\$ 71,106.15</b>
Marketing/Advertising/Outreach Costs	
Activity A Instruction (\$500/class)	\$ 25,000.00
Activity B Facilities (\$500/class)	\$ 25,000.00
Activity C Workbooks (\$200/class)	\$ 10,000.00
Activity D Refreshments (\$300/class)	\$ 15,000.00
Activity E Marketing Strategies for Customer Enrollment	\$ 75,000.00
<b>Total Marketing/Advertising/Outreach Costs</b>	<b>\$ 150,000.00</b>
Evaluation, Measurement and Verification Costs	
Labor	To be determined
Benefits	To be determined
Travel/Conference/Training	To be determined
Reporting/Tracking/Development-Information Services	To be determined
Materials & Handling	To be determined
Overhead and General and Administrative Costs	To be determined
<b>Total Evaluation, Measurement and Verification Costs</b>	<b>\$ 15,000.00</b>
Other Costs	
Profit (5%)	\$ 12,422.61
Financing Cost	0.00
<b>Total Other Costs</b>	<b>\$ 12,422.61</b>
<b>Budget Grand Total</b>	<b>\$ 248,528.76</b>

Fully Burdened Labor Rates	
Classification	\$/hour
Project Manager/Principal Engineer	125
Principal Engineer	100
Engineer	95
Instructional Design	95
Technician	55
Administrative Assistant	35
Mileage	\$.31 / mile

## Payment Schedule

We propose payment be made either on a monthly or quarterly basis, whichever is most appropriate.

# The Proposed Marketing Campaign and Outreach Program

This section describes the proposed 2003 Small-business Outreach Seminars marketing campaign and outreach program.

ASW Engineering proposes to design, create, market, and deliver up to 50 educational and motivational presentations to eligible groups of small business owners, managers, and operators. This outreach program will include efforts to target “hard-to-reach” nonresidential small business consumers. Many of the targeted customers are considered “hard-to-reach” because of business size (very small businesses) and due to their geographic location (they reside in outlying regions and small or rural communities that are less well served).

## Goals of the Presentations

The overall goal of the proposed outreach program is to move customers to take action — implementing the *Energy Savers Program* and other similar programs to reduce their energy consumption. Specifically the proposed presentations will be designed to:

- Educate customers about relevant energy-saving technologies and the benefits they offer:
  - Explain the long-term economic benefits of implementing energy efficiency measures
  - Explain the environmental benefits of implementing energy efficiency measures
  - Describe the benefits of an improved working environment made possible by energy efficient and better quality lighting
- Promote programs that can help customers implement energy-saving technologies and practices:
  - Describe the SBEA *Energy Savers Program* structure and benefits
  - Provide information about programs offered by investor-owned utilities (IOUs) and Third Party programs
- Overcome typical customer “objections” to implementing energy efficiency measures:
  - Explore participants’ questions and concerns about implementing energy-savings measures
  - Address these questions and concerns with accurate information and suggested actions that defuse and outweigh the objections
- Sound a call to action:

Request that the participants sign up for a no-cost survey or commit to pursuing other appropriate programs



The focus of the proposed presentations revolves around the SBEA *Energy Savers Program*, which has the primary goal of reducing peak demand and energy usage through short-payback efficiency improvements. Specifically, the existing program:

- Focuses on four energy efficiency measures:
  - Installation of efficient lighting systems (mostly lamp and ballast retrofit).
  - Installation of programmable thermostats to control air-cooled package unit HVAC systems
  - Tune-ups for air-cooled package unit air conditioners
  - Tune-ups for self-contained and split-system refrigeration systems
- Offers small businesses financial incentives in the form of matching funds

In addition, the presentations will address other appropriate energy efficiency topics, and may include educational information about:

- Window tinting
- Cool roof technology
- How to minimize heat gain
- How to maximize heat removal

## Description of the Proposed Presentations

We propose to develop an interesting and colorful presentation that will be delivered to selected audiences (up to 50 sessions with approximately 20 participants in each session).

The new outreach and educational program will:

- Employ a targeted approach to identifying eligible customers and contractors
- Apply an innovative, effective approach to overcoming customer objections and market barriers
- Focus on energy efficiency measures that are appealing because they are easy to implement and yield significant cost benefit to the customer
- Include the use of “props” to demonstrate the different technologies. For example, we may show example energy-efficient compact florescent bulbs, ballasts, thermostats, etc.
- Encourage participation and coordination with other relevant programs

The presentation will last approximately one hour and will be a simple, straight-ahead presentation that clearly describes the technologies involved and their potential cost savings and other benefits. It will have a strong dose of positive attitude and a hint of cheerleading.

Participants will receive handouts that will guide their attention during the presentation and serve as useful resources after the presentation. The materials we plan to distribute during the presentations include:

- A booklet that briefly describes and explains the relevant technologies, emphasizing the benefits of these technologies:
    - Efficient lighting systems
    - Programmable thermostats
    - Tune-ups for air-cooled package unit air conditioners
    - Tune-ups for self-contained and split-system refrigeration systems
    - Other appropriate technologies
  - Marketing materials and contact information for the SBEA *Energy Savers Program*
  - Promotional and informational material (brochures, flyers, response cards, summary sheets, etc.) for other relevant programs
- Other third-party initiatives that we anticipate promoting at the presentation include:
- Statewide 2003 Express Efficiency Program, which offers rebates for energy efficient motors, lighting applications, air conditioning systems (package units), water heaters, boilers, etc.
  - Statewide Standard Performance Contract measures that do not fall under the Express Efficiency Program
  - Other programs as appropriate
- (See “Plans for Coordinating with Other Program Providers” on p. 14 for more information on other programs that may be addressed in the proposed presentations.)

ASW Engineering has many years of experience delivering presentations to many diverse audiences that represent many different types of groups, businesses, organizations, and affiliations. The presentation and the handout materials may be customized to address specific audiences. For example, we could alter the presentation and add specific content to the handout materials that would address energy efficient machinery, motors, lighting, thermostats, or other components that specifically meet the business needs of the audience.

From our experience, we feel that an hour-long presentation will be sufficient to accomplish our goals of educating and motivating the participants, and at the same time won't discourage attendance or allow the participants to lose interest. Also, we know that small business owners are often reluctant to leave their business to attend presentations for more than an hour.

Major sections of the presentation will include:

- Energy efficiency technologies and benefits
- Programs supporting energy-efficiency measures
- Questions and concerns (objections) regarding the measures and programs
- Next steps — a call to action

## **Addressing Customer Questions and Concerns**

Often, persuading customers to implement energy efficiency measures involves addressing their “objections” to the “sale.”

During the presentations we hope to uncover the questions and concerns that participants have relative to the recommended energy-efficiency measures and provide current and accurate information in an effort to overcome these objections.

For example, the following summarizes some of the hurdles that typically make small businesses reluctant to implement energy-efficiency measures and summarizes key points that can surmount these obstacles.

### ■ **Lack of financing for energy efficiency improvements**

When up-front investments are high, or payback periods are long, customers in the target market segments typically are reluctant to participate.

- Financial incentives make the recommended measures more affordable.
- The measures provide the customer with the maximum energy savings and the shortest payback periods when incentives are included.
- Education regarding the recommended measures and the savings they offer will underscore the near-term financial benefits to the customer.

### ■ **Reluctance to invest in leased facilities**

Business owners who lease a facility are reluctant to invest in energy efficiency measures when they perceive that they will reap the benefit only for a relatively short period (the length of the lease).

- Property owners and their facilities will benefit for the lifetime of the measure with improved property values.
- Encourage property owners to approach their tenants with an offer to split the incentive with the tenant. This technique has proven very successful—tenants are more likely to participate in the program and share in the energy savings.

### ■ **Difficulty in finding the “right” service provider**

Even if they are convinced of the potential cost-benefit of an efficiency measure, many customers falter with the implementation because they find it difficult and time-consuming to find a reliable, cost-competitive service provider.

- Available programs make implementation fast, easy, and attractive because we find the product and we find the providers.
- As unbiased consultants, we offer customers the assurance that they are receiving the products and services at they want at a competitive price. We keep the service providers honest and hold them accountable.
- Through the program’s contractor-direct rebate, contractors can offer “the big business price” to the small businesses; and we ensure that they do.

■ **Insufficient resources or lack of time to pursue implementing energy efficiency measures**

Many customers in our target population are fully occupied with the day-to-day requirements of running the business. They don't have time to pursue information about energy efficiency, nor do they have the time or resources to coordinate and monitor the actual installation and implementation of energy efficiency measures. They may agree that the measures and technology they've heard about are good, but they are just too busy to investigate and take action.

- Because SBEA will “do the research for them,” customers do not need to take time away from the business at hand.
- Because SBEA screens and selects contractors, customers do not need to spend time going through that process. Customers can feel assured the contractors will do the job promised at a reasonable price.

## The Proposed Marketing and Outreach Effort

ASW Engineering and the SBEA will work with Geltz Communications (SBEA's marketing resource) to market the proposed presentations to small business owners and other key members of the target market. We expect that Geltz Communications will again develop a successful marketing strategy for the proposed program.

This year, the small and very small business markets have been very difficult to reach and extremely hard-hit by rising energy costs and the economic downturn. Our experience underscores the Commission's belief that one way to overcome many of the barriers in this market is to develop local programs that utilize local relationships and networks.

We will work with Geltz Communications, who is proposing a separate marketing and outreach program, to take advantage of their existing channels of communication to pursue a variety of synergistic relationships with trade associations, city governments, contractors and property manager relationships that underscore the marketing message and improve the acceptance of the program by small business owners.

ASW will be able to “piggy-back” onto their outreach program, which proposes to include a clearing house for all Third Party Initiatives and that will primarily target city governments with the friendly competition of an energy efficiency challenge.

We will encourage participation by offering small incentives to attend the educational and marketing outreach presentation, such as providing refreshments, and giving away compact fluorescent lamps, and other energy-efficiency energy-saving devices that might be appropriate.

## **A Targeted Approach to Identify Customers**

In the new program, we propose a systematic, targeted approach to identifying eligible customers, which is key to this program's success. Techniques that have been effective include:

- Market through trade and professional associations to enroll customers
- Market through chambers of commerce to enroll customers
- Work with local contractors and coordinate marketing efforts with cities and local agencies
- Market to appropriate property managers, who have been very receptive in the past

We will employ a marketing strategy that:

- Capitalizes general concerns about the price and availability of energy
- Leverages on existing communications channels and cross-markets other energy efficiency programs.
- Targets small businesses who experience:
  - Long operating hours
  - High lighting, HVAC, and refrigeration demand and end-use intensity
  - High air conditioning demand
- Takes advantage of our knowledge of the particular benefits and challenges of working with small business in outlying communities and areas
- Capitalizes on our experience in working with ethnic small business groups

## **Media Outlets**

The media outlets that we anticipate using for the proposed program are all essentially printed publications. We will work in conjunction with Geltz Communications to market the presentations through direct contact with local community and trade organizations. In addition, we will enlist our current site survey technicians to hand out promotional flyers.

We will produce new materials based on existing marketing collateral that summarizes the SBEA program and describes the new presentations. We anticipate that the marketing effort will include:

- Promotional mailers and flyers sent to professional groups, Chambers of Commerce, and other professional organizations
- Promotional articles in trade magazines, journals, newsletters, and perhaps selected local newspapers

## **Expected Number Of Promotional Spots, etc. to be Produced or Developed**

We will not produce any radio or television spots for this program. The marketing and outreach materials for this program will be paper-based workbooks, handouts, brochures, and flyers.

We are uncertain of the exact number of these materials; however, we estimate we will produce and deliver approximately 1,200 workbooks, and possibly several thousand handouts, brochures, and flyers.

## **Expected Target Audience**

The target audience for this marketing and outreach program are businesses who have a peak demand of less than 500 kW per month. This program targets “very small” to “medium” hard-to-reach and underserved businesses in Santa Barbara, Ventura, San Bernardino, and Riverside counties, and parts of Los Angeles county All of the businesses will be located within the Southern California Edison (SCE) and Southern California Gas (SoCalGas) territories.

Our target market segment is “Small Nonresidential Comprehensive Retrofit” and will fall under the category of “Nonresidential Hard-to-Reach.” That is, those customers who typically do not have easy access to program information or generally do not participate in energy efficiency programs.

Our program will target businesses that fall in the “Very Small Nonresidential,” “Small Nonresidential,” and “Medium Nonresidential” customer categories. Of the entire population of very small to medium businesses, approximately 50% will fall under the category “Nonresidential Hard-to-Reach.”

Summary of Target Population		
Customer Category	Annual Electric Demand	Est. % of Total Target Population
Very Small Nonresidential	less than 20 kW	50%
Small Nonresidential	between 20 kW and 100 kW	25%
Medium Nonresidential	between 100 kW and 500 kW	25%

## **Key Characteristics of the Target Population**

Statewide research and our own SBEA pilot program have taught us the following about small business owners:

- Small business owners are very well aware of the state's ongoing efforts to implement energy efficient technology.
- Many of them are willing to take no-cost and low-cost measures, such as conservation and lighting changes, but are often unwilling to pay for more expensive retrofits if they are renters, especially if the payback period is more than two years.
- They are approached with many offers for energy retrofits from energy service companies, whom the small business owners do not perceive as equally credible as the utility.
- They are not automatically motivated by money-saving offers from utilities (whom they perceive as the expert on energy matters).
- The endorsement of a trusted third party such as a trade association makes a significant impact in breaking down their attitudinal barriers.
- For renters, the participation of their property manager in administering and/or financing their retrofit makes the most significant impact.
- Small business owners are typically engaged more than full time in running their business and uninterested in anything that interferes with business operations.

In addition, we have discovered the following about small businesses in outlying areas outside of the Los Angeles Basin and Orange County:

- They are harder to reach with mainstream outreach efforts delivered regionally, but more likely to heed messages delivered on a local level than their urban and suburban counterparts (due to more “noise” and distractions in the big city).
- Their local city small business agencies are more likely to endorse and help deliver a program such as this, since these agencies must pour more resources into attracting and retaining small businesses than their urban or suburban counterparts.
- They are likely to live in the same community as their business, and more likely to turn out for community events than their urban or suburban counterparts.

## **Number of IOU Customers Expected to be Reached**

We anticipate the Marketing/Outreach program will deliver the message to about 1000 IOU customers. We anticipate delivering approximately 50 presentations, with approximately 20 per session (1000 total).

## **Plans for Coordinating with Other Program Providers**

Both to benefit the customer and to support other energy efficiency programs sponsored by state and local agencies, we encourage participants to seek other opportunities for implementing cost-effective energy efficiency measures outside the scope of the *Energy Savers Program*.

There are several Statewide and Local Energy Efficiency Programs that were selected for the 2002-03 program that are a good “fit” for our program. We will contact the sponsors of these programs and make arrangements for acquiring appropriate promotional materials they may have, and hand out these materials at our presentations.

Specifically, the new educational marketing and outreach program will:

- Inform customers of other local and state programs they might participate in and describe the general features and benefits of those programs
- As appropriate, provide customers with promotional and informational material (brochures, flyers, response cards, summary sheets, etc.) for other relevant programs

Some examples of measures supported by other programs include those offered by the PUC’s statewide “Express Efficiency” program which offers rebates and incentives for energy-efficiency hardware and products such as new air conditioners, energy efficient motors, refrigeration system upgrades, and others, plus other programs that offer programs for reflective window film, insulation, and more. If it is funded for next year, we will also promote the statewide “Standard Performance Contract program, sponsored by multiple utilities (IOUs).

In addition, SBEA is an ENERGY STAR® for Small Business Partner. We will let customers know of the many benefits this EPA program offers.

Note that there are other programs that, although they address behavior modification and conservation, are a “good fit” with this marketing outreach program. Depending upon the specific needs of each presentation audience, we may distribute materials targeted toward the following programs:

- “Mobile Energy Clinic Program” sponsored by ADM Associates, Inc.
- “Comprehensive Hard-to-Reach Residential and Small Commercial Energy Savings Program” sponsored by American Synergy Corporation
- “Pre-Rinse Spray Head Installation Program for the Food Service Industry” sponsored by California Urban Water Conservation Council
- “The Energy District Approach for Sustainable Energy Efficiency in California” sponsored by Energy Coalition
- “Demand Control Ventilation Pilot Program” sponsored by ICF Associates, Inc.
- “Check Me” program sponsored by Proctor Engineering Group Ltd.
- “Small Nonresidential Hard to Reach Program” sponsored by Southern California Edison
- “Nonresidential Financial Incentives Program” sponsored by Southern California Edison



- “Residential Duct Services Program” sponsored by Energy Analysis Technologies
- “Energy Star CFL Program for Small Hardware and Grocery Retailers” sponsored by Ecos Consulting
- “Chinese Language Efficiency Outreach (CLEO)” sponsored by Global Energy Services
- “Efficient Affordable Housing Program” sponsored by Heschong Mahone Group
- “Comprehensive Compressed Air Program” sponsored by Xenergy

## **Methods of Evaluating Success and Using the Results to Make Improvements**

In today’s economic climate, the task of stirring up interest for energy efficiency programs is a significant challenge. We anticipate developing an aggressive marketing plan, which we hope will attract the types of small businesses that can benefit from the mentioned energy efficiency programs.

Success of the program will be determined by the number of IOU customers who attend the presentations, and the number who sign up for the *Energy Savers Program* or other programs in an effort to implement energy efficient technologies.

We feel the goal of 1,000 participants in the proposed presentations is realistic. We anticipate that approximately 20% of these participants will sign up for a site survey with the *Energy Savers Program*. In addition, some participants likely will pursue other programs promoted during the presentations; however, it will be difficult to assess the direct impact of the presentations on programs other than the *Energy Savers Program*.

If the marketing and outreach efforts are successful, we will attain this goal. However, we will be flexible and adapt our efforts based on the response, and modify our strategy as we go along.

Toward the end of ongoing improvement, we will conclude each presentation with an opportunity for participants to provide feedback that will guide our future efforts. For example, we may ask participants to fill out a questionnaire asking: What was good about this session? What didn’t work? What would you do to improve it? As a result of this presentation, how likely are you to implement something or find out more information? Then based on the feedback we could adjust the presentation.

## ***Measurement and Verification***

During the course of delivering the presentations, we will keep records of all of the attendees. We will have an independent, third-party entity conduct the verification activities. Through telephone surveys they will follow up with a sampling of the participants two to six months after the presentations. During these interviews, they will verify that the individuals contacted attended the presentation and will find out if have they have implemented any energy-savings efforts or energy efficiency projects or whether they have future plans to do so. After receiving the information, a report will be generated.

## Description of Implementer's Qualifications

This section identifies key personnel who will operate and administer the proposed SBEA program, including their duties, responsibilities, and background. All personnel are qualified and have experience with this type of program.

The ASW team, in conjunction with the Small Business Energy Alliance (SBEA), provides energy efficiency programs for the small business sector.

## Relevant Experience

ASW Engineering, the Small Business Energy Alliance, Geltz Communications, and McLain Instructional Design have worked together for many years successfully implementing marketing and media campaigns, and educational outreach programs and specifically have experience with program delivery and marketing outreach.

- We have reached thousands of customers over the last 20 years with ASW's "Managing Small Business Costs" presentations. Also, ASW has a 20-year history of providing training statewide for all of the major utilities including PG&E, SCE, SDG&E, and SoCalGas, as well as many of the municipal utility companies.
- SBEA has had success with the *Energy Savers Programs*.
  - The *Energy Savers Program* was designed and conducted by the Small Business Energy Alliance (SBEA), a firm whose principals have more than 25 years of experience bringing energy efficiency solutions to California's small businesses.
  - SBEA was created by ASW Engineering in response to the need for a firm small that businesses could relate to — with a name that describes what the organization does.
  - SBEA has the continuing support of utility companies, trade associations, and regulatory agencies.
  - SBEA received a Certificate of Recognition from the State of California and the "Flex Your Power" program
  - SBEA has been designated as a Partner by the EPA's ENERGY STAR® for Small Business Program.

Together, ASW, Geltz, and McLain worked on a successful training program for Pacific Gas and Electric and SCE titled "Issues in Energy Efficiency for Builder/Developer Sales Agents." This training for new home sales agents highlighted the features of the utility company-based Comfort Home and Comfort Wise energy conservation programs. The components of this training included a needs assessment, curriculum design, development of instructor materials, participant workbooks, and train-the-trainer materials

This team also produced materials for many successful presentations for SoCalGas for drycleaners and coin laundries titled "Clean Profits for Your Coin Laundry" and "Clean Profits for Drycleaners."

## **The SBEA Team**

In addition to its core employees, ASW Engineering Management Consultants will receive assistance from professionals in the fields of marketing and education consulting. ASW Engineering brings a long history of successful energy efficiency programs and customer surveying. The SBEA team offers a depth of expertise in marketing and program development, project management, survey design and implementation, engineering and energy analysis, project implementation, and report writing.

**David Wylie**, Vice President and cofounder of ASW Engineering, will be Program Director and will play a major role in the design and implementation of the project. He has worked primarily in the areas of commercial and industrial energy efficiency, managing projects for the U.S. Department of Energy, energy utilities and many individual clients. He is a published author on energy efficient technologies and is an expert witness for legal proceedings. Mr. Wylie is a licensed professional engineer and holds both a BS in engineering and a Masters in Business Administration. Mr. Wylie is currently President of the local Southern California Board of APEM (Association of Professional Energy Managers).

**Chris Baginski** will serve as day-to-day Project Manager and Engineer for this project. Chris has managed hundreds of on-site surveys throughout the state of California.

**Christine Geltz** will serve as marketing coordinator for this project. She has 20 years of experience in corporate and marketing communications management, 10 of them in the energy services field. She has developed a wide range of marketing communication strategies and programs for such entities as Southern California Edison, Pacific Gas and Electric, the municipal utilities of Los Angeles, Pasadena and Glendale, Southern California Public Power Authority and other public and private energy and water-related companies. Ms. Geltz serves on the Board of Directors of the Association of Energy Services Professional International and is that organization's vice president of communications. She holds a BA in Education and will receive an MA in Communications in the spring of 2002. Geltz Communications is a full-service communications consulting firm specializing in the electric utility industry.

**Lisa McLain** and **Jim Davenport** of McLain Instructional Design Consulting will develop the presentation and training materials and will create the handout booklet. Combined, McLain and Davenport have over 35 years of experience creating instructionally sound training and presentation materials. McLain holds a BA in Education and a Masters in Communications. Davenport holds a BS in Computer Science and specializes in developing technical training materials.

## ***Team Qualifications***

The SBEA team offers the technical skill and experience necessary to complete all aspects of this project. We have very strong skills and an impressive experience base in:

- Project planning and program design
- Marketing and communications
- Development of engaging and accessible educational materials
- Delivery of informative and motivational presentations

Considering the success of the year 2001 *Energy Savers Program*, the SBEA team is very qualified to oversee a similar program for selected local communities.

## **Qualifications of Primary Implementer**

ASW Engineering Management Consultants, Inc. is the primary implementer of this project

ASW Engineering Management Consultants, Inc., is a Southern California engineering and facility management consulting company. It has been in business since 1982.

Our present staff comprises six mechanical and electrical engineers, fifteen survey technicians, and three office-support personnel.

- Our engineers are specialized in electrical and mechanical systems in commercial and industrial facilities.
- Our survey technicians (retired SCE energy service representatives) have considerable experience in the process of visiting customer sites, assessing systems' pre-retrofit status, examining associated documentation and identifying energy efficiency opportunities.
- Our office-support personnel are congenial, efficient, and focused on supporting our efforts to serve our clients effectively.

We maintain a focus on new technologies and energy efficiencies. Other interests of the firm include air quality management, utility program development, and the economics of new construction.

Our offices are located in Tustin, California, and we pride ourselves on our ability to respond very quickly to requests for consultation or assistance with a broad client base in southern California and elsewhere. The company's founding objectives remain the cornerstone of our business:

- Maximize the value of our client's investment
- Model, develop, modify, and build energy systems that assure the highest integrity
- Provide comprehensive, affordable approaches to energy efficiency and environmental measures, using the best possible technologies for each application

## ***ASW's Professional Experience***

ASW delivers effective solutions that provide cost-effective, continued energy savings and regulatory compliance, optimizing facility operations. We work closely with building owners/operators and the design community, as well as the construction industry, to maintain a balanced approach that accommodates the perspectives and recommendations of experts from key fields.

## ***Technical Acumen and Project Management***

One of ASW's major strengths is our unique combination of technical acumen and project management skills.

- We have a rock-solid foundation built on our professionals' understanding of existing and emerging technologies.
  - We gain up-to-date, first-hand knowledge of new technologies and performance variances between the lab and field applications through the multiple research-and-development projects we manage each year.
  - Our engineers and survey technicians have extensive, practical experience in assessing existing and proposed systems to identify opportunities to improve energy efficiency and reduce operating costs.
- As we manage our projects, we ensure engineering integrity, while keeping client needs and ensuring customer satisfaction to the forefront.
  - We are adept at working with a broad customer base and understand the organizational structures, objectives, and decision-making processes.
  - We facilitate effective communication and coordination among all parties involved in a project, leading to better and more timely decisions.
  - We also regularly bring projects in on time and at, or under, budget.

## ***Training Delivery and Development***

ASW also provides training for numerous utilities, teaching both their energy services representatives and their major customers.

- We have provided more than 15,000 hours of classroom instruction for our clients in the past decade.
  - The subjects we address in our training range from refrigerant handling, ozone water treatment, energy management evaluation and selection, lighting strategies, how to do an energy survey, industrial and manufacturing energy management, and more.
  - We presently are providing more than ten courses for Southern California Edison CTAC for customers at large.
- We have developed training about deregulation that has been used by Southern California Edison, Association of Bay Area Governments, Public Utility Commission, Honeywell, New Energy Ventures, and others.
- The ASW team has developed more than 100 individual classes over the past 20 years.

## **Qualifications of Proposed Subcontractors**

### ***Geltz Communications***

Geltz Communications is a full-service communications consulting firm specializing in the electric utility industry. Located in Pasadena, California, our services include branding, marketing, employee and technical communications strategies and the components needed to fulfill them: planning, pricing, design, writing, editing, photography and print production supervision. Our deliverables have included marketing literature, training programs and materials, research reports and articles, corporate annual reports, internal and external newsletters, technical fact sheets and case studies. Integrated Internet and CD-ROM applications of these deliverables are a recent addition to the company portfolio.

Geltz is dedicated to the following principles:

- Provide cost-effective, strategic marketing programs that help our clients achieve their energy efficiency goals.
- Turn somewhat complex technical information into engaging copy packaged with attractive design that speaks to targeted audiences.
- Stay flexible to fine-tune program elements so that we can leverage budgets for maximum goal fulfillment.

### ***Marketing Qualifications***

Geltz Communications has delivered many successful energy efficiency programs for investor-owned and municipal utilities in California. These programs have exceeded program goals and led to extended contracts for expanded programs encompassing new technologies and new ways of reaching customers. In addition, the programs' marketing and communication tools have won awards from such distinguished entities as the Association of Energy Services Professionals International, the International Association of Business Communicators, the Society for Technical Communication, and the National Planning Corporation. And Ms. Geltz has recently been a featured speaker at professional development seminars around the country, helping energy services professionals to incorporate the most effective communication tools and strategies into their efficiency programs.

### ***Significant Accomplishments in Marketing Energy Efficiency Programs***

- Statewide Energy Design Resources Program (SCE, PG&E, SDG&E)
- Statewide Savings By Design Program (SCE, PG&E, SDG&E, SoCalGas)
- Statewide Comfort Home/ComfortWise Program (SCE, PG&E, SDG&E)
- SoCalGas's Clean Profits Program
- Pasadena Water & Power's Pasadena Savings Plus Program
- State of California Third Party Initiative branded the Small Business Energy Alliance (SBEA)

### ***McLain Instructional Design Consulting***

For over 20 years, McLain Instructional Design Consulting has designed and developed training and marketing materials for a wide variety of clients, encompassing both technical and motivational programs. The McLain ID team has won international awards for the quality and effectiveness of their training programs, which include a broad base of delivery formats, including print, video, audio, web-based, and instructor-led interactive presentations.

Located in Lake Forest, California, they have worked for over 12 years developing educational materials for many of the California utility companies, including SCE, PG&E, SDG&E, and SoCalGas. A partial list of other clients includes Union Bank, Canon USA, Canon Computer Systems, IBM, Xerox, Microsoft, and Northrop Grumman.

### ***SBEA Presenter Qualifications***

The SBEA team of presenters offers the technical skills and experience necessary to deliver presentations to the target audiences. Most of ASW's staff of survey technicians have 20 or more years experience with this type of work.

We are very familiar with existing protocols for residential sites, commercial sites and the industrial sector. In addition, the team has extensive experience with utility programs, hotlines, and services utilities can offer their customers.

### ***Presenters***

In addition to the ASW principal David Wylie, the list below names of members of the SBEA team who are experienced and knowledgeable and who we anticipate will be trained to provide the presentations. Resumes are included in the Exhibits section.

- Vic Sanchez
- Larrie Engel
- Thomas A. Jones, Jr.
- William W. Rock

### **Disclosure of Any Potential Conflicts of Interest**

To the best of our knowledge, the parties that are proposing on this program, ASW Engineering, Geltz Communications, and McLain Instructional Design Consulting do not have any financial or organizational relationships that could result in potential conflicts of interest (e.g., favoring certain programs or customers).

## Timeline for Program Implementation

In this section we present a proposed list of project development and rollout tasks and describe approximately when they'll be performed.

SBEA will begin work on this project within 30 days after we receive notice we have been selected to implement the program. The start date will probably be sometime around February or March 2003 and the program will continue through December 31, 2003. The schedule of start dates and major milestones on the following pages assumes a start date of March 1, 2002 but can be adjusted if the project actually starts earlier.

Task or Major Project Milestone		Approximate Start Date
<b>1 Project Initiation</b>		
1.1	Agenda; ASW Responds to CPUC Data Requests; ASW Responds to CPUC Selected Draft Decisions	March 1, 2003
1.2	Project Initiation Meeting; Strategic Planning and Implementation Efforts	March 8, 2003
1.3	Memo	March 15, 2003
<b>2 Develop Program Implementation Plan</b>		
2.1	Draft Program Plan	March 20, 2003
2.2	Final Program Plan	March 22, 2003
<b>3 Marketing Strategies for Customer Enrollment</b>		
3.1	Develop Marketing Plan	March 20, 2003
3.2	Begin Marketing Efforts	March 22, 2003
3.3	Maintain Marketing Efforts	on-going
<b>4 Develop Presentation Strategy and Delivery Materials</b>		
4.1	Perform Brief Needs Assessment and Identify Training Objectives; Instructional Design	March 15, 2003
4.2	Create Draft Materials	April 1, 2003
4.3	Create Final Materials	May 2, 2003



<b>5</b>	<b>Develop Handout Booklets and Feedback Forms</b>	
5.1	Handout Booklet Instructional Design	March 22, 2003
5.2	Graphics Design	March 22, 2003
5.3	Create Draft Materials	April 1, 2003
5.4	Create Final Materials	April 20, 2003
5.5	Reproduce Workbooks	April 20, 2003
<b>6</b>	<b>Train-the-Trainer Sessions</b>	
6.1	Develop Training Materials	April 3, 2003
6.2	Conduct Training	April 22, 2003
<b>7</b>	<b>Develop Program Tracking Database</b>	
7.1	Build Database	March 22, 2003
7.2	Build Reporting and Tracking Tools	April 1, 2003
7.3	Maintain and Update Database	On-going
<b>8</b>	<b>Market and Book Presentations</b>	<b>March 1, 2003</b>
8.1	Develop Possible Locations for Outreach Classes	March 22, 2003
8.2	Meet with Facilities People for Availability and Training Facilities	April 1, 2003
8.3	Negotiate Pricing with Facilities	April 20, 2003
<b>9</b>	<b>Deliver Presentations</b>	<b>Begin around May 1, 2003</b>
<b>10</b>	<b>Year One Quarterly Reports</b>	<b>quarterly</b>
<b>11</b>	<b>Measurement and Verification Follow-up Activities (EM&amp;V Plan)</b>	
11.1	Develop EM&V Plan	August 1, 2003
11.2	Outsource EM&V	August 15, 2003
<b>12</b>	<b>Draft Program Final Report</b>	<b>year-end 2003</b>
<b>13</b>	<b>Final Project Meeting</b>	<b>year-end 2003</b>
<b>14</b>	<b>Final Report and Database</b>	<b>year-end 2003</b>

# Selected Resumes and Sample Training Pages

This section contains selected resumes for:

- David Wylie
- Vic Sanchez
- Larrie Engel
- Thomas A. Jones, Jr.
- William W. Rock

This section also contains sample pages from educational and outreach projects successfully completed by the SBEA team and selected resumes.

Sample pages from:

- *Energy Efficiency for Sales Agents*
- “Clean Profits for Your Coin Laundry” and “Clean Profits for Drycleaners.”
- Managing your Business’s Energy Costs

## David Wylie

### ***Experience Highlights***

*1982 – present*

**ASW Engineering Management Consultants** — Mechanical-System Analyst. Mr. Wylie has the primary responsibility for customer relations, which includes project definition, oversight, analyses and delivery. He also provides technical training for utility companies and facility managers.

A few of the more notable projects that Mr. Wylie has led in the past several years include:

- Developed and managed 2001 CPUC Third Party Initiative for Small Business Energy Savings Program
- Developed and instructed PG&E's Industrial Strength Energy Efficiency Seminar series 2000-present. Over 1000 of PG&E's industrial customers attended one-day efficiency seminars on boilers, chillers, packaged HVAC systems, motors and drives, commercial refrigeration, and compressed air.
- Developed and instructed Edison's Customer Technology Application Center (CTAC) efficiency seminars from 1991 to present
- Oversight responsibility of ASW's data collection survey team of state-wide studies as directed by the California Public Utilities Commission:
  - Residential Ceiling Fan Study 2001
  - Non-Residential New Construction Evaluation for PG&E, 2000
  - Non-Residential New Construction Program for SCE, Industrial Saturation Survey, 1997-1998
  - Energy Advantage Home Program Retention Study for SoCalGas, 1994
- Managed operations of the Ancillary Services Coalition, a state-wide load shedding aggregation that participates in ISO Demand Response programs, 1998 to present
- Developed and instructed the "Clean Profits" program for SoCalGas, an energy efficiency seminar for coin laundries and dry cleaners
- Developed and instructed internal training courses for SCE Customer Energy Services Department (1978–to present)
- Authored *New Refrigerants For Air Conditioning and Refrigeration Systems*, published by Fairmont Press (1995)
- Project Manager - Commercial Refrigeration Research Laboratory, a Southern California Edison project (1993–94)
- Developed interactive air conditioning and lighting savings assessment protocol for Southern California Edison (1995)
- Project Manager for the development of a Fuel Substitution Savings Analysis protocol for SCE/PUC filing (1994)
- Project Manager for the Research and Demonstration of several test sites utilizing ozone water treatment for cooling towers (1993–94)
- Engineering Supervision Company, Newport Beach, California - Project Engineer (1976–82). Mr. Wylie's responsibilities included mechanical surveys and development of building-operation programs which involved field-data collection, operating-data analysis and training functions

## ***Education***

- Master of Business Administration; National University, California, 1988
- Bachelor of Science, Engineering Technology: Air-Conditioning and Refrigeration; California Polytechnic State University, San Luis Obispo, 1976

## ***Professional Affiliations and Awards***

- Registered Professional Mechanical Engineer, California, 1978
- Member of the American Society of Heating Refrigerating and Air-Conditioning Engineers (ASHRAE) since 1973
- Member of the Association of Professional Energy Managers (APEM) since 1986; president of the Los Angeles/Orange County Chapter, 2000-2002
- Community College Teaching Credential, California, 1978
- ASHRAE Energy Award for Outstanding Achievement, 1993
- ASHRAE Technology Award for Alternative/Renewable Energy Use, 1993

## ***Publications***

- *Electric Rate Options: New Products and More Choices*, Edison Electric Institute, 1995
- *Practical Concern for Refrigerant Management in Buildings*, Energy Engineering, 1994
- *Evaluating and Selecting Thermal Energy Storage*, Energy Engineering, 1990
- *New Refrigerants for Air Conditioning and Refrigeration Systems*, Fairmont Press, 1996
- *“Hybrid” Central Plants*, Energy Engineering, 1997

## Vic Sanchez

### ***Experience Highlights***

*1996 – present*

**ASW Engineering Management Consultants** — Survey Technician. In the past several years, Vic has been involved in several projects, some of which are:

- Database management of several hundred site surveys for energy use and aggregation analysis.
- Managed field technicians and data collection project of 400 sites.

*1970 – 1996*

**Southern California Edison** — A range of roles and responsibilities, including the following:

- Technical Specialist — Developed communication materials and publications relating to electric environmental technologies to help customers become more productive and achieve environmental compliance; coordinated trade show participation; interfaced with Edison sales representatives and customers (1994 – 1996)
- Sales Representative — Assisted some of Edison's largest customers with energy matters, performed energy surveys and performed rate analyses; served as integrator of services to solve customer needs, securing manufacturers and vendors for customers to save them money and improve operation efficiency; implemented customer rebate programs (1992 – 1994)
- Program Manager — Co-managed \$10,000,000 residential new construction program, managed thermal energy storage program, and managed interruptible rate program. (1987 – 1992)
- Training Consultant — Developed technical training programs for field engineers, sales personnel and staff; coordinated training activities for 500 field and staff personnel (1982 – 1987)
- Solar Representative — Implemented solar rebate program, solar inspector. (1980 – 1982)
- Conservation Consultant — Performed residential energy audits, satisfied customer billing inquiries (1977 – 1980)
- Field Service Representative (1970 – 1977)

### ***Education***

- Associate of Arts, Construction Technology; Fullerton College, 1965
- Certificate of Completion, Energy Management; Coastline College, 1981
- Energy Auditor Certificate; California Energy Commission, 1981
- Energy Technical Training; Southern California Edison, 1977 – 1996

## Larrie Engel

Larrie Engel, Field Survey Technician, came to ASW from SCE where he worked for 11 years as an Account Executive and as an Energy Services Specialist. Mr. Engel earned his Associate of Arts Degree in Liberal Arts from El Camino College, HVAC and Air Distribution Certificates from Coastline Community College, and an Energy Management Certificate from Orange Coast College in Costa Mesa, California.

*1996– present*

**ASW Engineering Management Consultants** — Survey Technician. In the past several years, Mr. Jones has been involved in several projects, including:

- 500-site DOE-2 database collection from Participants and Non-Participants for SCE's Commercial Energy Efficiency Incentive Program Evaluation
- Industrial Saturation Survey — Audited industrial sites using handheld computer. Verified data when necessary
- Visual Meter Inventory — Collected and verified meter data using laptop computer and digital camera
- Megdal & Associates — Collected data for the Statewide Direct Assistance Program Measure Retention Study which provided estimated lifetimes of the common weatherization measures installed by all utilities through their Direct Assistance Programs
- Megdal & Associates — Collected data for the Measure Retention Study for San Diego Gas and Electric and Pacific Gas and Electric Companies' 1994 and 1995 Residential Weatherization Retrofit Incentives Programs
- Regional Economic Research, Inc. — Collected data for Edison's 1997 Commercial Energy Efficiency Incentive Program Evaluation
- Regional Economic Research, Inc. — Collected data for Southern California Gas Retention Study
- RLW Analytics — Collected data for the PG&E Non-Residential New Construction Evaluation
- RLW Analytics — Collected data for the SCE Non-Residential New Construction Evaluation

## Thomas A. Jones, Jr.

**Objectives:** To continue to perform analysis and develop recommendations, which address customer or company problems and issues, that require broad technical knowledge in energy utilization, energy efficiency, operation, and maintenance, and equipment analysis; to influence and communicate trends, conditions, and corrective actions in areas of specialty.

### ***Experience Highlights***

- 1996–present*    **ASW Engineering Management Consultants** — Survey Technician. In the past several years, Mr. Jones has been involved in several projects, including:
- 500-site DOE-2 database collection from Participants and Non-Participants for SCE's Commercial Energy Efficiency Incentive Program Evaluation
  - Industrial Saturation Survey — Audited industrial sites using handheld computer. Verified data when necessary
  - Visual Meter Inventory — Collected and verified meter data using laptop computer and digital camera
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  - Regional Economic Research, Inc. — Collected data for Edison's 1997 Commercial Energy Efficiency Incentive Program Evaluation
  - Regional Economic Research, Inc. — Collected data for Southern California Gas Retention Study
  - RLW Analytics — Collected data for the PG&E Non-Residential New Construction Evaluation
  - RLW Analytics — Collected data for the SCE Non-Residential New Construction Evaluation
- 1968 – 1998*    **Southern California Edison** — Served in a range of roles and responsibilities:
- Lineman (9.5 yrs.)
  - Service Planner (4 yrs.)
  - Technical Specialist (3 yrs.)
  - Service Crew Foreman (4.5 yrs.)
  - Energy Service Representative (9 yrs.)

## William W. Rock

**Objective:** Manage operations for new or existing companies, that are aggressive in marketing services or products in the lighting, energy or maintenance industry. Involvement in service operations with immediate short-term goals to build the foundation for long term results.

### *Qualifications*

27 years in the lighting maintenance and retrofit industry. Oversee the day to day operations of both the maintenance division of the business, and the project management of lighting retrofits.

### *Education*

High School  
M.A.P. Program- Management Action Program  
Management Training Seminars

### *Employment*

- 11/2001 - Present**    **Energy Auditor, ASW Engineering** Work on a project by project basis completing energy audits to customers in Southern California as needed. Meeting with Small Business owners to show them how to conserve energy.
- 4/2001 - 11/2001**    **Development Manager, Lighting Technology Services, Inc.** I was hired in April of 2001 to oversee the day to day operations of the lighting maintenance department for this company. My job duties and focus were changed within an hour on my first day. My focus was shifted to sales and away from the maintenance department. I was given the task of developing the small business retrofit program for the company. The sales efforts went from zero to \$60,000 per month within a couple of months. This was accomplished by finding a company that had utility rebate money to spend and the relationship I was able to build with that company.
- 1998 – 2001**    **Western Regional Operations Manager, SLi Lighting Solutions**  
Started in 1998 with this company as Parke Industries as Operations Manager for the Lighting Maintenance Department. Shortly there after the Company was sold to SRS and was given the added responsibilities of Project managing lighting retrofit projects. In July of 1999 SRS sold to SLi. In May of 2000, was promoted to a position overseeing all operations for the Western States.
- 1996 - 1998**    **Development Manager, California Retrofit, Inc.** Responsible for the development of new sales to the company, for the scheduling and the project managing of all retrofit work. This included all aspects of the job from the pre-construction meeting through the final project acceptance from the customer. Developed and implemented procedures used in the daily routine of the service department. Reported directly to the owner of the company, and handled many other functions as directed by him.



- 1992 - 1996 **Regional Manager, Campbell Lighting Services** Responsible for Branch Operations at the corporate office in Corona, as well as the branch in Hayward, and San Diego. For this lighting maintenance company I increased the productivity of the service departments through technical and safety training classes. Developed staff training of new sales personnel in the field to increase potential sales.
- 1975 - 1992 **Branch Manager, Amtech Lighting** Started in 1975 as Best Fluorescent Maintenance Company. Involved in all aspects of the company's service operations. Began as a service technician and was promoted to management operations. Implemented recommendations written during management program schooling. The company was purchased by Amtech Lighting in 1984, at that time I was the Operations Manager of the El Monte branch. Initiated changes in the procedures to decrease service response time. Relocated for Amtech to a troubling branch in Northern California and became the Branch Manager of that office. Production record of 130K in sales for the branch in the 4th month with profitable operations. Branch was consistently in the top 3 branches out of the 13 in the company. Initiated new sales of 50K per month as a result of providing quality service to the customer (An 85% increase in maintained monthly sales).

# How to Manage Your Business's Energy Costs



# 1. INTRODUCTION

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As the owner, manager, or operator of small- to medium-sized commercial properties, you should always be on the lookout for ways to **reduce operating costs** of the facilities you supervise.

The purpose of this seminar on *How to Manage Your Business's Energy Costs* is to present some ideas that we hope will lead you in the right direction to ways you can reduce and better manage your energy costs.

In this seminar, we will:

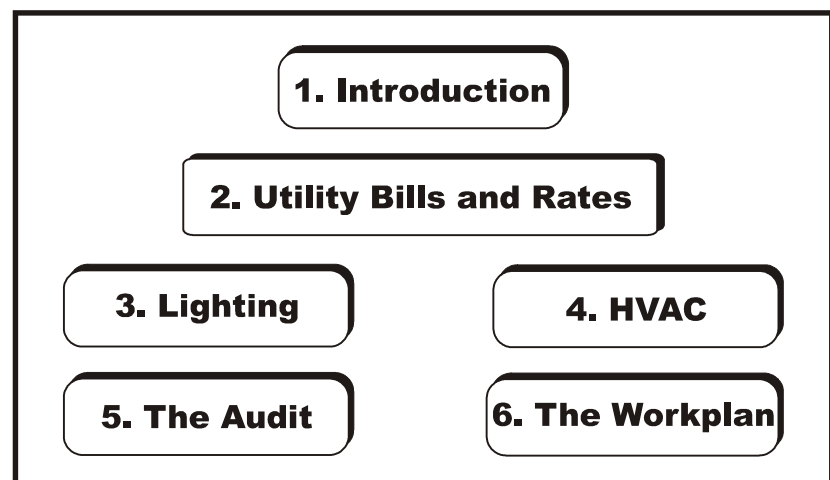
- Identify five major aspects of **energy conservation**, and discuss how to evaluate your property to find areas where you can improve energy conservation.

Raise your awareness of the factors and tradeoffs that are involved in energy consumption.

- Identify the components of your **utility bills** and the different rate options you have.

Explain how rates are designed to help you better understand energy conservation strategies.

- Identify **lighting** issues, and discuss ways you can reduce lighting energy costs.
- Identify **HVAC** (heating, ventilation, and air conditioning) issues, and discuss ways you can reduce HVAC energy costs.
- Identify and discuss the main steps of an **energy audit**. Use calculation worksheets that can point to possible Energy Conservation Opportunities you might implement.
- Develop a **workplan** that can help you learn how to proceed with energy audits and identify Energy Conservation Opportunities.



# Energy Conservation:

## *A Business Opportunity*

As an owner, manager, or operator of commercial property, you should view *energy conservation* as a business opportunity—as a way you can increase profit.

At the very least, regard energy conservation as a way you can reduce your energy costs and save your business money.

As with any business endeavor, any potential opportunities for energy conservation must be recognized, evaluated, and acted upon.

Any conservation measure you implement must meet your requirements of a good business investment—either by reducing overhead costs or by increasing productivity in an improved working environment.

### **Energy conservation is...**

**“Maximizing the efficient use of energy resources in a manner that is consistent with:**

- **The comfort of occupants.**
- **The productivity of personnel.**
- **Informed and sound business practices.”**

Now that we have identified the basic premises, goals and constraints, the question is . . .

How can you reap the benefits of managing your energy costs?

# An Approach for Energy Conservation

The steps for implementing energy conservation measures are fairly straightforward:

While the issue of “common sense” is not within the scope of this seminar, we can expand on the remaining steps.

## Background Information

You can get the background information you need by answering five essential questions related to energy conservation:

### 1. What does your operation really require?

In answering this question, very specifically define the “end results” of the energy you are presently using, as well as the parameters that govern when the energy use is efficient. Below are a few examples.

End Results	Parameters
Environmental climate control (HVAC systems)	<ul style="list-style-type: none"><li>• Temperature</li><li>• Operating time</li><li>• Humidity</li></ul>
Lighting (general, task, advertisement, etc.)	<ul style="list-style-type: none"><li>• Illumination areas</li><li>• Illumination levels</li><li>• Color balance</li><li>• Operating time</li></ul>
Cooking and dishwashing	<ul style="list-style-type: none"><li>• Temperature</li><li>• Operating time</li></ul>

### 2. How can the weather help?

Local climate conditions can impact, negatively or positively, the end results you are trying to accomplish.


In addition to recognizing the adverse affects of weather, it is also important to recognize how and when outside climate conditions can be used to your advantage.

# Clean Profits for Your Coin Laundry

Cutting Your Costs through  
Energy Efficiency

## Participant Workbook



A  Sempra Energy company

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## Participant Workbook

# 2: Energy-efficiency Measures

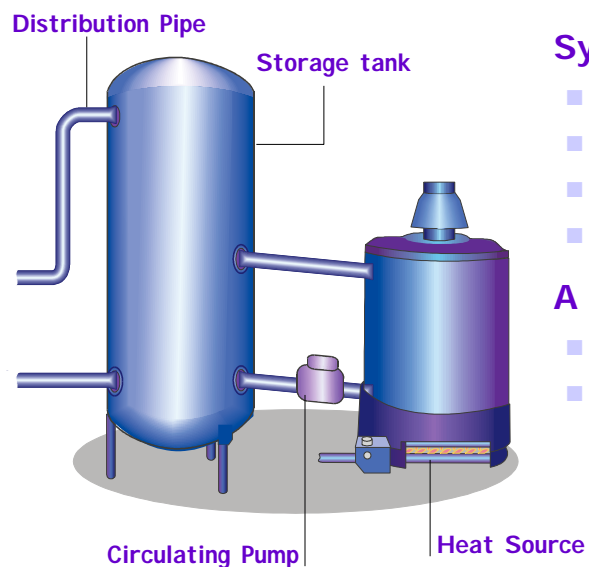
What can I do to increase my store's energy efficiency?

Where should I focus my efforts?

What are the tradeoffs?



## Water Heaters



### System Components

- Heat source
- Storage tank (most systems)
- Distribution pipes
- Circulating pump

### A Couple Common Terms

- Btu
- Energy efficiency rating

Clean Profits for Your Coin Laundry

6

## Notes:

Relative to your utilities, your water heater is your single most expensive piece of equipment to operate.

- What brand water heater do you have?
- What is its input rating in Btus?

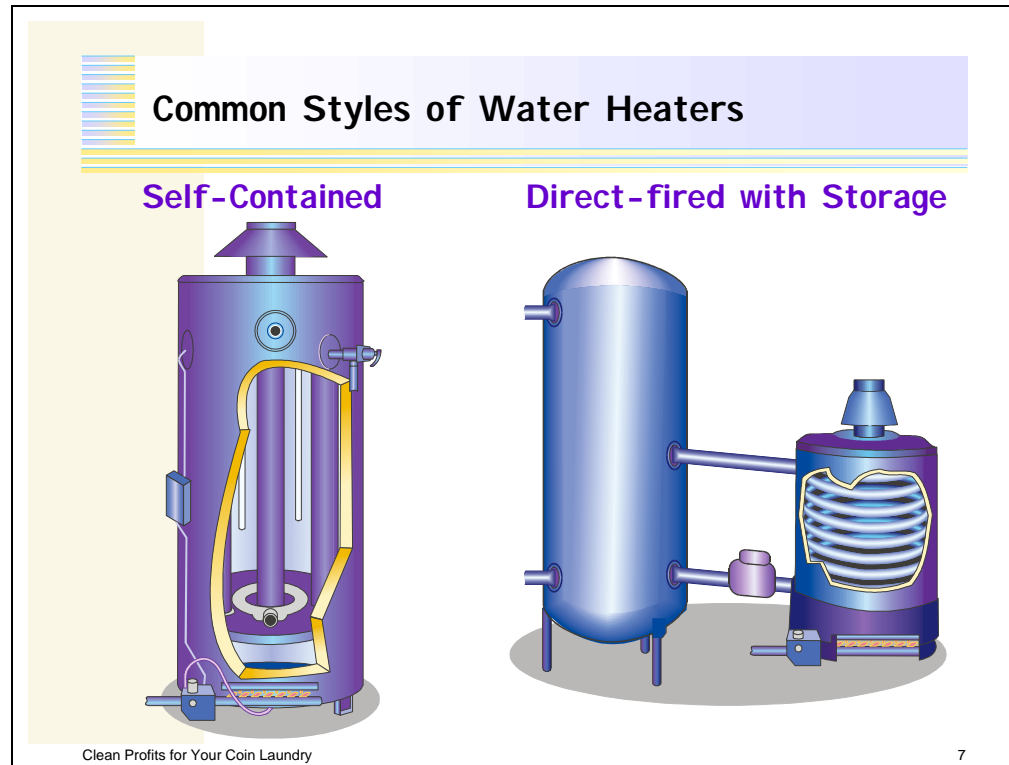
Some common terms you need to be familiar with to talk about water heaters:

- Btu — measure of heat; the amount of heat required to raise a pound of water (a pint or two cups of water) 1°F.  
Completely burning a single wooden kitchen match gives off about 1 Btu of heat.
- Energy Efficiency rating — ratio between Btu input and output  
A water heater that has input of 490,000\* Btu (490 kBtu) and output of 392,000 Btu (392 kBtu) has an energy efficiency rating of 80%. ( $392/490 = .80$ )

\* k = 1,000; 1 kBtu = 1,000 Btu



## 1-10 System Overview

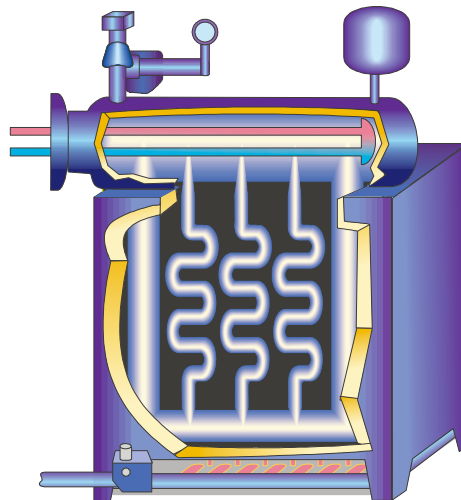


### Notes:

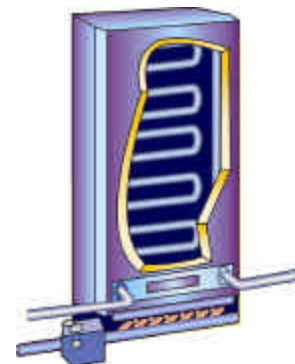
- **Self-contained**
  - How it works:
    - The heating unit and the storage tank are combined; similar to conventional home water heater design
    - Gas burner below the built-in storage tank heats the water contained in the tank
  - This design is typically used for smaller systems
- **Direct-fired with storage tank**
  - How it works:
    - Water comes in through copper tubing, gas burner heats copper tubing, as water flows through tubing it picks up heat
    - Hot water flows into the storage tank
  - **85% of the water heaters used in coin laundries are this style.**

## Common Styles of Water Heaters (cont.)

### Indirect-fired with Storage



### Instantaneous (Tankless)



Clean Profits for Your Coin Laundry

8

## Notes:

- **Indirect-fired with storage tank**
  - How it works:
    - Heater water (“primary loop” water) is in copper or steel tubing and container; this is a closed loop and the water never leaves the heater. A second set of tubing is located inside the closed loop. “Process water” flows through the copper tubing located inside the closed loop.
    - A gas burner below the primary loop water heats the primary loop tubes, which in turn heat the water. The primary loop water heats the “process water” tube, which in turn heats the process water inside the tube.
    - Hot process water flows to the storage tank
  - This design typically is used when equipment that will have a long life is affordable.
- **Instantaneous**
  - Very limited or no storage
  - Water flows into the system, is heated as needed and flows directly to where the demand is.

# Clean Profits for Drycleaners

Cutting Your Costs through  
Energy Efficiency

## Participant Workbook



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## Participant Workbook

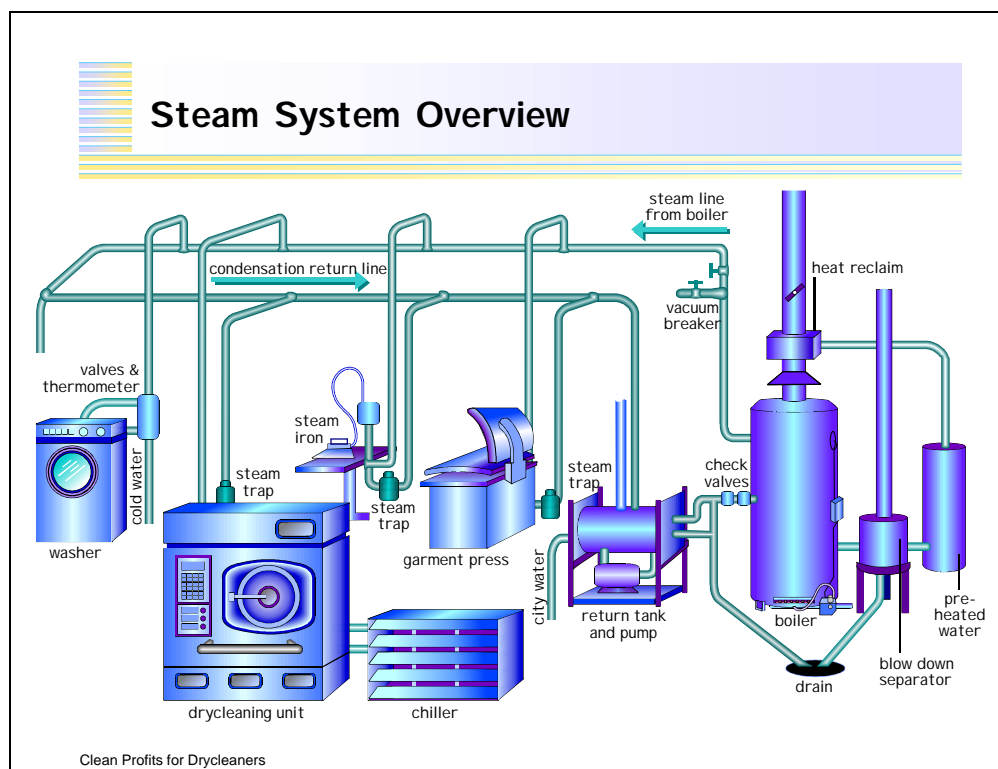
# 2: Energy-efficiency Measures

What can I do to increase my store's energy efficiency?

Where should I focus my efforts?

What are the tradeoffs?

## 2-10 Energy-efficiency Measures



### Notes:

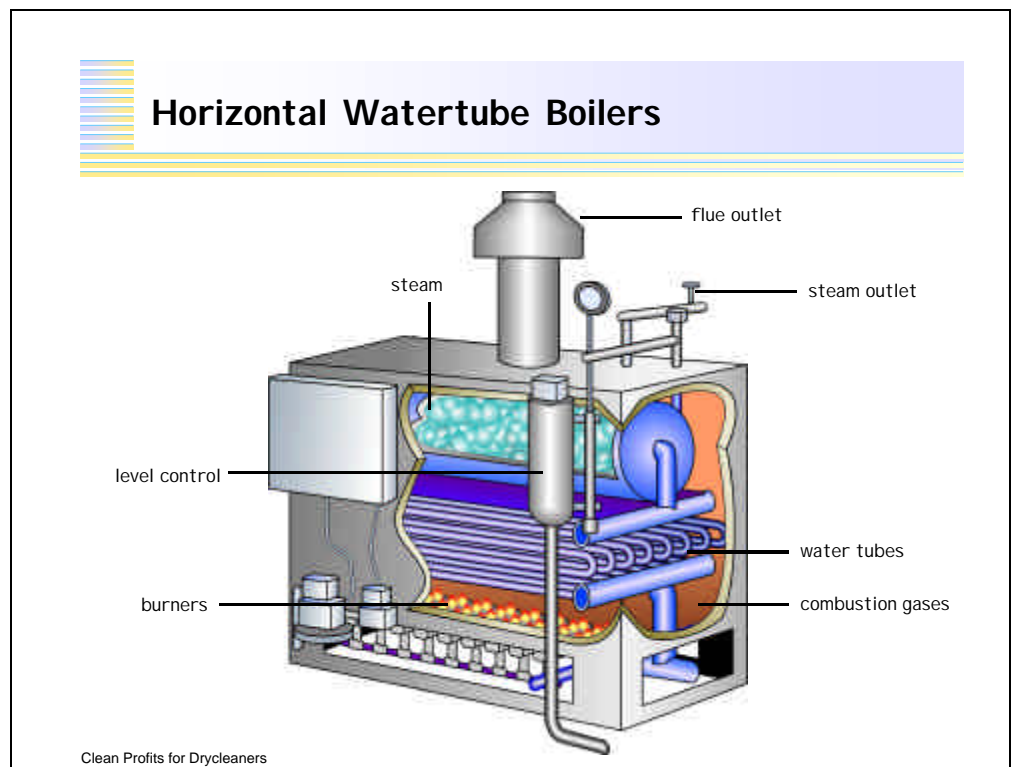
Relative to your utilities, your boiler is your single most expensive piece of equipment to operate.

- What type of boiler do you have?
- What is its input and output rating in Btus? output in horsepower?
- What is its efficiency rating?
- What do you suppose its actual operating efficiency is?

Some common terms you need to be familiar with to talk about boilers:

- Btu — measure of heat; the amount of heat required to raise a pound of water (a pint or two cups of water) 1°F. Completely burning a single wooden kitchen match gives off about 1 Btu of heat.
- Horsepower — measure of boiler size (output); equivalent to approximately 33,470 Btu/hour
- Energy Efficiency rating — ratio between Btu input and output  
A 10 HP (horsepower) boiler that has input of 420,000\* Btu (420 kBtu) and output of 336,000 Btu (336 kBtu) has an energy efficiency rating of 80%. ( $336,000/420,000 = .80$ )

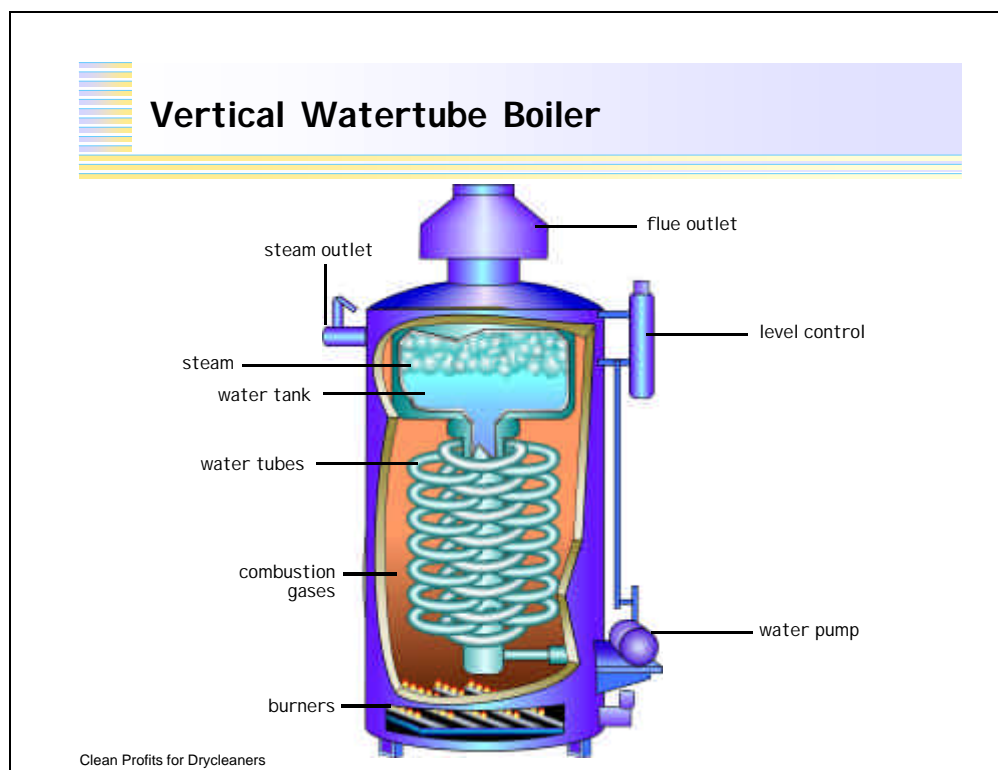
\* k = 1,000; 1 kBtu = 1,000 Btu



### Notes:

- A horizontal watertube boiler heats water flowing through tubes, creating steam in a drum.
  - Staggered tube bundles hold the water.
  - There are gas burners below the watertubes. The flame and combustion gases heat the water in the tubes.
  - The water boils and steam is released into a horizontal steam drum positioned on top of the watertubes.
  - A valve releases the appropriate amount of steam to maintain a relatively steady pressure.
- The condensate return tank may be attached to the boiler, or it may be a separate tank.
- Watertube boilers typically hold less water and have a faster water flow than tubeless boilers, so they transfer heat efficiently and create steam very quickly.

## 2-12 Energy-efficiency Measures



### Notes:

- As with the horizontal watertube design, vertical watertube boilers heat water flowing through tubes, creating steam in a drum.
  - A circular, vertical watertube bundle holds the water.
  - There are gas burners below the watertubes. The flame and combustion gases heat the water in the tubes.
  - The water boils and releases steam in a chamber at the top of the boiler
  - A valve releases the appropriate amount of steam to maintain a relatively steady pressure.
- A water-level control and return system replaces the need for a condensate return tank.
- Similar to the horizontal watertubes boiler, vertical watertube boilers hold comparatively little water and have a fast water flow — transferring heat efficiently and creating steam very quickly.
- Because it has a comparatively small “footprint,” this design typically is used when space is at a premium.

# Energy Efficiency *for* Sales Agents



a seminar sponsored by

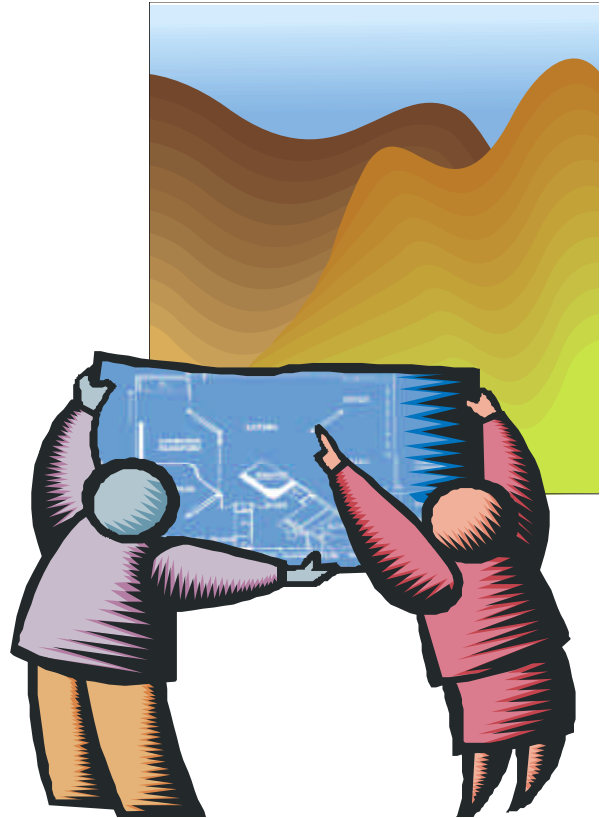


A  Semptra Energy<sup>SM</sup> company

This program is funded by California utility customers and administered by Southern California Edison and Pacific Gas and Electric Company, under the auspices of the California Public Utilities Commission.



Is energy  
efficiency  
important to  
you and your  
customers?



**What Do  
Your  
Customers  
Care About?**

In the space below, note the topics that appear to be of most interest to your customers. Do any of these areas relate directly to energy efficiency?

If so, mark them with a star. ★

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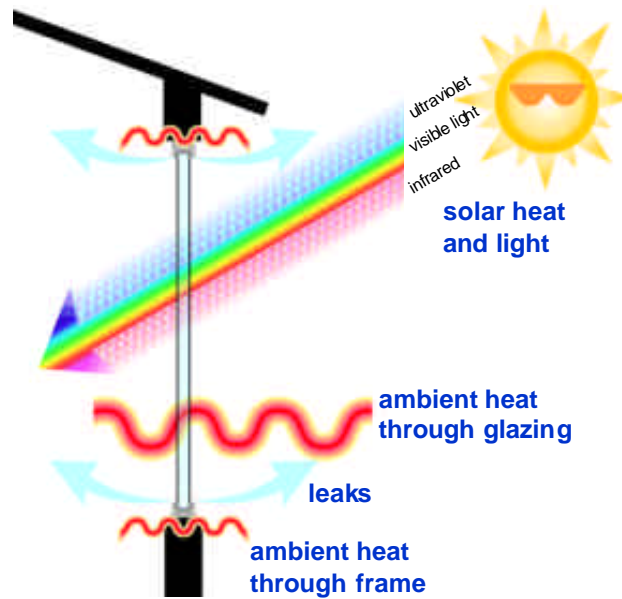
## Participant Workbook

# **2: Energy Efficiency Measures**

Which energy efficiency measures are most important to today's home buyers?

Which benefits do they provide?

## Window Considerations



Efficient windows:

- ▶ Maximize desirable light
- ▶ Minimize heat transfer
  - ▶ Solar heat gain (energy directly from sun's rays)
  - ▶ Ambient heat gain (energy conducted through air and glass due to differences in temperature)
  - ▶ Leaks (air infiltrated through minute cracks)

Energy Efficiency for Sales Agents

2-1

Notes:

## 2-2 Energy Efficiency Measures

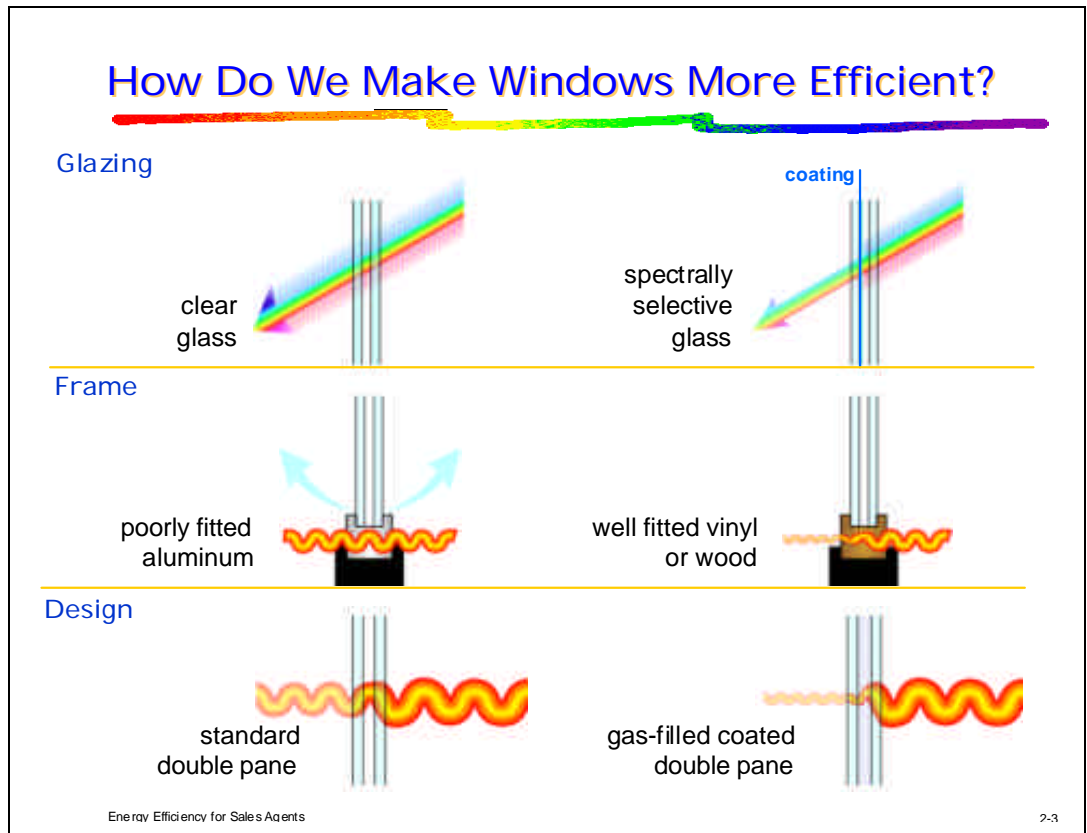
### Measures of Window Energy Efficiency

- **U-value** — How much heat from the air transfers through the glass and frame
- **SHGC (Solar Heat Gain Coefficient)** — How much heat directly from sunlight flows through the glass
- **VLT (Visible Light Transmittance)** — How much daylight comes through the glass
- **Air Leakage** — How much air gets through the cracks

Energy Efficiency for Sales Agents 2-2

### Notes:

- U-value
  - The **lower** the number, the lower the heat transfer (the better the “insulation”).
  - 0.35 or **less** is recommended for cold climates.
- SHGC
  - The **lower** the number, the lower the heat transfer (the better the “shading”).
  - 0.40 or **less** is recommended for warm climates.
- VLT
  - The **higher** the number, the more visible daylight comes through.
  - 0.50 or **higher** is recommended.
- Air Leakage
  - The **lower** the number the less air gets through the cracks.
  - 0.30 or **less** is recommended.



Notes:

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